on the 52 and 72 per cent. lines.—W. A. **Richardson**: A simplification of the Rosiwal method of micro-analysis. A method by which, using a drawing apparatus, the lengths of component minerals of a rock can be projected on to separate strips of paper and directly summed is described.—Dr. A. **Schoep**: The absence of cobalt in cornetite from Katanga, Belgian Congo. Microchemical tests made on carefully selected crystals from the original locality (Star of the Congo Mine) prove that cobalt is present only in associated black spots of heterogenite. The mineral is thus a hydrated phosphate of copper, agreeing completely with that recently described from Northern Rhodesia.

Paris.

Academy of Sciences, January 9.—M. Emile Bertin in the chair.—C. **Lallemand**: The genesis and present state of the science of the abacus.—T. **Varopoulos**: A class of increasing functions.—P. **Humbert**: The product of Laplace relative to certain hypercylinders.—G. **Dumas**: A normal table relating to unilateral surfaces.—A. **Denjoy**: Functions defined by series of rational fractions.—B. **Gambier**: Surfaces and varieties of translation of Sophus Lie.—C. **Nordmann** and M. **Le Morvan**: Observation of an abnormal star by the heterochrome photometer of the Paris Observatory. The star 13 Cepheus presents some singular anomalies. It belongs to the spectral type A (hydrogen stars), but has a yellow coloration. The colour photometer shows that the light intensity is distributed in the spectrum in such a manner that the more refrangible rays are proportionally less intense than in any of the stars hitherto studied, not only of this type, but also of types F and G. It is possible that the atmosphere surrounding this star possesses exceptional absorbing power.—E. **de Martonne**: The massif of Poïana Ruska and the correlation of the erosion cycles of the southern Carpathians.—E. **Carvallo**: The principle of relativity in dielectrics.—P. **Chevenard**: The expansion of chromium and the chrome-nickel alloys over a wide temperature interval. A differential dilatometer was employed in which the standard bar was a nichrome (with 10 per cent. of chromium), the law of expansion of which had been carefully determined by direct methods. A diagram is given of the results on commercially pure chromium (98·3 per cent.) and five chrome-nickel alloys. The diagram gives the coefficients of expansions as functions of the temperature over the range 0° C. to 900° C.—M. **Faillebin**: A mixed organo-metallic compound of aluminium. Aluminium and methylene iodide in dry ether in the presence of a little iodine react in two ways, the principal reaction giving $CH_2 \cdot AlI$ and AlI_3, the subsidiary reaction AlI_3 and ethylene.—J. **Barlot** and Mlle. M. T. **Brenet**: The determination of fatty acids by the formation of complex compounds with uranyl and sodium. Streng's reagent (acid solution of uranyl nitrate) is known to give a precipitate of a double salt with sodium acetate. Similar precipitates are obtained with the sodium salts of higher fatty acids, but only if the acid contains an even number of consecutive carbon atoms. Thus formates, propionates, *iso*butyrate, and normal valerates give no precipitate, but the reaction is obtained with acetic, normal butyric, fermentative valeric and normal caproic acids.—Y. **Milon** and L. **Dangeard**: A Redonian formation (Upper Miocene) forming ravines with the Eocene clays to the south of Rennes (Ille-et-Vilaine) containing iron minerals.—E. **Zaepffel**: The mechanism of the orientation of leaves. The movements of the leaf are connected with the distribution of water, and this distribution is influenced by the mobile starch.—C. **Douin**: The gametophyte of the Marchantiæ.—L. **Plantefol**: The toxicity of various nitrophenols for *Sterigmatocystis nigra*. Experiments were carried out with three isomeric nitrophenols, dinitrophenol, and trinitrophenol. All these proved more toxic to the mould than phenol itself. The three mononitrophenols differed in toxicity, the para-compounds being the most toxic. The dinitrophenol had the greatest effect in inhibiting the growth of the mould of any of the substances tried; it is nearly 300 times more toxic than phenol.—E. **Chatton**: Polymorphism and maturation of the spores of Syndinium.—R. **Sazerac** and C. **Levaditi**: The use of bismuth in the prophylaxy of syphilis. Sodium potassium tartarobismuthate, administered in intramuscular injection, acts preventively against syphilitic infection, and the same salt applied locally in the form of salve acts preventively even after infection. The conclusions were arrived at after experiments on rabbits.

Diary of Societies.

THURSDAY, January 26.

Royal Institution of Great Britain, at 3.—S. Gordon: Sea Birds and Seals.

Royal Society, at 4.30.—W. B. Hardy and Ida Doubleday: Boundary Lubrication: The Paraffin Series.—Prof. W. A. Bone, A. R. Pearson, E. Sinkinson, and W. E. Stockings: Researches on the Chemistry of Coal. Part 2: The Resinic Constituents and Coking Propensities of Coals.—Dr. J. A. Crowther and B. J. Schonland: The Scattering of β-rays.—Ann C. Davies: The Minimum Electron Energies associated with the Excitation of the Spectra of Helium.—C. N. Hinshelwood, H. Hartley, and B. Topley: The Influence of Temperature on Two Alternative Modes of Decomposition of Formic Acid.—Prof. C. V. Raman: The Molecular Scattering of Light in Water and the Colour of the Sea.

Royal Aeronautical Society (Students' Meeting) (at Royal Society of Arts), at 7.—C. Daniel: Practical Points in Fuselage Construction.

Institution of Locomotive Engineers (London) (at Caxton Hall), at 7.15.—C. J. Allen: The Influence of Design on Express Locomotive Performance.

Concrete Institute, at 7.30.—E. B. Moullin: Capillary Canals in Concrete, and the Percolation of Water through Them.

Royal Microscopical Society (Metallurgical Section), at 7.30.—H. Wrighton: Demonstration of Polishing Metal Specimens.

Royal Society of Medicine (Urology Section), at 8.30.

Society of Antiquaries, at 8.30.

FRIDAY, January 27.

Association of Economic Biologists (in Botanical Lecture Theatre, Imperial College of Science and Technology), at 2.30.—Prof. E. P. Stebbing and others: Discussion: The Importance of Scientific Research in Forestry and its Position in the Empire.

Royal Society of Arts (Indian Section), at 4.30.—A. L. Howard: The Timbers of India and Burma.

Physical Society of London (at Imperial College of Science and Technology), at 5.—T. H. Littlewood: The Diffusion of Solutions.—H. R. Nettleton: A Special Apparatus for the Measurement at Various Temperatures of the Thomson Effect in Metals.—J. J. Manley: A Defect in the Sprengel Pump: its Cause and the Remedy.

Royal College of Surgeons of England, at 5.—Sir Arthur Keith: Hunterian Lecture: The Facial Characteristics of the Races native to India.

Royal Society of Medicine (Study of Disease in Children Section), at 5.

Junior Institution of Engineers, at 8.—L M. Jockel: Fuels and the Boiler-house.

Royal Society of Medicine (Epidemiology and State Medicine Section), at 8.—Dr. S. M. Copeman, Dr. R. A. O'Brien, Dr. A. J, Eagleton, and A. T. Glenny: Experiences with the Schick Test, and Active Immunisation against Diphtheria.

Royal Institution of Great Britain, at 9.—Viscount Burnham: Journalism

SATURDAY, January 28.

Essex Field Club (in Physical Lecture Theatre, West Ham Municipal College), at 3.—C. Nicholson: The Rosy-Marbled Moth (*Erastria venustula*) in Britain (with special reference to Essex).—G. Morris: Some Neolithic Sites in the Valley of the Essex Cam.

Royal Institution of Great Britain, at 3.—Dr. C. Macpherson: The Evolution of Organ Music (2).

MONDAY, January 30.

Institute of Actuaries, at 5.—G. King: A Short Method of Constructing Select Mortality Tables: Further Developments.

Royal Society of Arts, at 8.—C. Ainsworth Mitchell: Inks (Cantor Lectures) (2).

Medical Society of London, at 9.—Sir Leonard Rogers: Amœbic Liver Abscess: Its Pathology, Prevention, and Cure (Lettsomian Lectures) (1).

TUESDAY, January 31.

Royal Horticultural Society, at 1.

Royal Institution of Great Britain, at 3.—Prof. H. H. Turner: Variable Stars (1); Short Period Variables.

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Royal Photographic Society of Great Britain, at 7.—H. H. Wrench: Our Old Village Churches and their Story.

Illuminating Engineering Society (Joint meeting with the Royal Aeronautical Society) (at Royal Society of Arts), at 8.—Lt.-Col. L. F. Blandy and others: Discussion: The Use of Light as an Aid to Aerial Navigation.

WEDNESDAY, February 1.

Geological Society of London, at 5.30.—C. E. N. Bromehead: Some Notes on the New 6-inch Geological Survey of London and the Influence of the Geology on the History of the Area.

Royal Society of Medicine (Surgery Section), at 5.30.—Major H. D. Gillies: Demonstration of Plastic Surgery.

Institution of Electrical Engineers (Wireless Section), at 6.—Major J. Erskine-Murray: (*a*) The Determination of the Decrement of a Distant Sending Station; (*b*) Some New Methods of Radio-Navigation.

Entomological Society of London, at 8.

Royal Society of Arts, at 8.—A. Wilcock: Surface Printing by Rollers in the Cotton Industries: A Comparison with other Processes of Printing Patterns for Cretonnes, Dress Materials, Wallpapers, etc.

Society of Public Analysts and other Analytical Chemists (at Chemical Society), at 8.—J L. Lizius and N. Evers: Studies in the Titration of Acids and Bases.—Dr. J. C. Drummond and A. F. Watson: The Sulphuric Acid Reaction for Liver Oils and its Significance.—W. Dickson and W. C. Easterbrook: The Quantitative Separation of Nitrobody Mixtures from Nitro-glycerine.

THURSDAY, February 2.

Royal Institution of Great Britain, at 3.—Sir Napier Shaw: Droughts and Floods (1).

Royal Society, at 4.30.—*Probable Papers.*—C. Shearer: The Oxidation Processes of the Echinoderm Egg during Fertilisation.—J. Schmidt: The Breeding Places of the Eel.—J. Gray: The Mechanism of Ciliary Movement.—J. Gray: The Mechanism of Ciliary Movement. II. The Effect of Ions on the Cell Membrane.—J. S. Huxley and L. T. Hogben: Experiments on Amphibian Metamorphosis and Pigment Responses in Relation to Internal Secretions.

Linnean Society of London, at 5.—F. Johanssen: The Canadian Arctic Expedition.—Dr. J. C. Willis and U. Yule: Some Statistics of Evolution and Distribution in Plants and Animals, and their Significance.—Mrs. E. M. Reid: Note on Fossil Floras.

Royal Society of Medicine (Medicine Section), at 5.—Discussion on the Treatment of Gastric Ulcer. Speakers: Sir William Hale-White, Sir William Willcox, Sir Berkeley Moynihan, and Mr. Sherren.

Institution of Electrical Engineers, at 6.—L. J. Romero and J. B. Palmer: The Interconnection of A.C. Power Stations.

Chemical Society, at 8.—E. J. Hartung: The Action of Light on Silver Bromide.—C. K. Ingold: The Structure of the Benzine Nucleus. Part I. Intra-nuclear Tautomerism.—C. K. Ingold: The Structure of the Benzine Nucleus. Part II. Synthetic Formation of the Bridged Modification of the Nucleus.—C. K. Ingold and H. A. Piggott: The Structure of the Benzine Nucleus. Part III. The Suppression of Intra-nuclear Change.

FRIDAY, February 3.

Royal Society of Medicine (Laryngology Section), at 4.45.

Royal Astronomical Society, at 5.—Geophysical Discussion on the Depth of Origin of Earthquakes. Prof. Love in chair. Speakers: Prof. Turner, Prof. Lamb, R. D. Oldham, Dr. H. Jeffreys, Prof. Knott, Dr. C. Davison, and Major Taylor.

Royal College of Surgeons of England, at 5.—Prof. K. M. Walker: The Nature and Cause of Old Age Enlargement of the Prostate (Hunterian Lecture).

Eugenics Education Society (at Royal Society), at 8.—Prof. H. J. Fleure: Some Social Bearings of Race Study.

Junior Institution of Engineers, at 8.—Major W. Gregson: Utilisation of Waste Heat from Internal Combustion Engines.

Royal Society of Medicine (Anæsthetics Section), at 8.30.—Discussion on the Uses and Limitations of N_2O and O_2 Anæsthesia. Speakers: Dr. A. L. Flemming and others.

Royal Institution of Great Britain, at 9.—Sir Francis Younghusband: The Mount Everest Expedition.

PUBLIC LECTURES.

(*A number in brackets indicates the number of a lecture in a series.*)

THURSDAY, January 26.

University College, at 5.15.—B. S. Rowntree: Industrial Unrest.

King's College, at 5.30.—Dr. O. Faber: Reinforced Concrete (2).

Gresham College, at 6.—A. R. Hinks: Astronomy in Daily Use (3).

St. John's Hospital for Diseases of the Skin, at 6.—Dr. W. K. Sibley: Alopecia and its Treatment (Chesterfield Lecture).

FRIDAY, January 27.

Meteorological Office (South Kensington), at 3.—Sir Napier Shaw: The Structure of the Atmosphere and the Meteorology of the Globe (2).

King's College, at 5.30.—Dr. H. W. Williams: The Peoples of the Caucasus (2); at 6.—Prof. G. Young: Brazil.

Tavistock Clinic for Functional Nerve Cases (at the Mary Ward Settlement, Tavistock Place), at 5.30.—Dr. H. Crichton Miller: The New Psychology and its Bearing on Education (1).

Gresham College, at 6.—A. R. Hinks: Astronomy in Daily Use (4).

SATURDAY, January 28.

London Day Training College, at 11 a.m.—Prof. J. Adams: The School Class (2).

Horniman Museum (Forest Hill), at 3.30.—F. Balfour-Browne: The Life and Habits of Mason Bees.

MONDAY, January 30.

University College, at 5.—A. T. Walmisley: The Bridges over the River Thames at London.

King's College, at 5.30.—Dr. J. Steppat: Recent Developments in German Education and Student Life.—Prof. L. L. Fortescue: Wireless Transmitting Valves (2).

WEDNESDAY, February 1.

Horniman Museum (Forest Hill), at 6.—W. W. Skeat: The Living Past in Britain (2).

THURSDAY, February 2.

King's College, at 5.30.—Dr. O. Faber: Reinforced Concrete (3).

St. John's Hospital for Diseases of the Skin (Leicester Square, W.C.2), at 6.—Dr. J. L. Bunch: Drug Eruptions (Chesterfield Lecture).

Civic Education League (at Leplay House, 65 Belgrave Road, S.W.1), at 8.15.—Miss Barbara Low: Psycho-analysis in relation to Civics.

FRIDAY, February 3.

Meteorological Office (South Kensington), at 3.—Sir Napier Shaw: The Structure of the Atmosphere and the Meteorology of the Globe (3).

University College, at 5.—Prof. G. Elliot Smith: The Evolution of Man (1).

King's College, at 5.30.—Rev. Dr. F. A. P. Aveling: Matter, Mind, and Man.—Dr. H. W. Williams: The Peoples of the Caucasus (3).

Tavistock Clinic for Functional Nerve Cases (at the Mary Ward Settlement, Tavistock Place, W.C.1), at 5.30.—Dr. H. Crichton Miller: The New Psychology and its Bearing on Education (2).

SATURDAY, February 4.

Salters' Hall (St. Swithin's Lane, E.C.4), at 10.30 a.m.—Dr. M. O. Forster: The Relation between Pure and Applied Chemistry.

London Day Training College, at 11 a.m.—Prof. J. Adams: The School Class (3).

Horniman Museum (Forest Hill), at 3.30.—E. Lovett: The Folk-lore of Natural History.

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